

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) A method of screening a racehorse candidate, said method comprising:
  - (i) obtaining a measurement of the width of the ventricular septal wall of said racehorse candidate; ~~and~~
  - (ii) comparing said measurement to a collection of measurements from a group of horses, wherein said collection of measurements comprises ventricular septal wall width measurements for horses of about the same age, sex, and weight as said racehorse candidate; and
  - (iii) selecting said racehorse candidate if it has a ventricular septal wall width that is greater than the mean ventricular septal wall width from said collection of measurements.
2. (Canceled) ~~The method of claim 1, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width that is greater than the mean ventricular septal wall width from said collection of measurements.~~
3. (Currently amended) The method of claim 1, ~~the method further comprising the step of selecting~~ wherein said racehorse candidate is selected if it has a ventricular septal wall width that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width measurements from said collection of measurements.
4. (Original) The method of claim 1, wherein said screening takes place at an auction.
5. (Currently amended) The method of claim 1, the method further comprising the step of ~~[(iii)]~~ obtaining a measurement of the cross-sectional area of the left ventricle in diastole of said racehorse candidate;

wherein said collection of measurements further comprises left ventricle in diastole cross-sectional area measurements for horses of about the same age, sex, and weight as said racehorse candidate.

6. (Currently amended) The method of claim 5, ~~further comprising the step of selecting wherein~~ said racehorse candidate is selected if it has a ventricular septal wall width and left ventricle in diastole cross sectional area that is greater than the mean ventricular septal wall width and left ventricle in diastole cross-sectional area measurement from said collection of measurements.

7. (Currently amended) The method of claim 5, ~~further comprising the step of selecting wherein~~ said racehorse candidate is selected if it has a ventricular septal wall width and a left ventricle in diastole cross sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and left ventricle in diastole cross sectional area measurements from said collection of measurements.

8. (Currently amended) The method of claim 1, wherein said ventricular septal wall is situated between a left ventricle and a right ventricle, said left ventricle having a free wall and at least one moderator band extending between said ventricular septal wall and said free wall, said right ventricle having a free wall having an endocardial edge, said right ventricular free wall terminating at a junction with an interventricular septum, and wherein said width measurement is obtained by measuring, in a left parasternal short-axis view obtained at end diastole, the distance from the endocardial edge of the right ventricular free wall, at the point where the wall meets the interventricular septum, through the interventricular septum, to the point of attachment of the moderator band to the ventricular septal wall in the left ventricle.

9. (Original) The method of claim 1, wherein said measurement is obtained from a left parasternal short axis echocardiogram of the left ventricle of said racehorse.

10. (Original) The method of claim 5, wherein said left ventricle in diastole cross sectional area measurement is obtained by measuring the circumference of the left ventricular chamber.
11. (Original) The method of claim 5, wherein said left ventricle in diastole cross sectional area measurement is obtained from a left parasternal short-axis echocardiogram of the left ventricle of said racehorse.
12. (Original) The method of claim 1, the method further comprising the steps of  
[[: (iii)]] obtaining a measurement of the cross-sectional area of the left ventricle in systole of said racehorse candidate;  
wherein said collection of measurements further comprises left ventricle in systole cross-sectional area measurements of horses of about the same age, sex, and weight as said racehorse candidate.
13. (Currently amended) The method of claim 12, ~~further comprising the step of selecting~~ wherein said racehorse candidate is selected if it has a ventricular septal wall width and left ventricle in systole cross sectional area that is greater than the mean ventricular septal wall width and left ventricle in systole cross-sectional area measurement from said collection of measurements.
14. (Currently amended) The method of claim 12, ~~further comprising the step of selecting~~ wherein said racehorse candidate is selected if it has a ventricular septal wall width and a left ventricle in systole cross sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and left ventricle in systole cross sectional area measurements from said collection of measurements.
15. (Currently amended) The method of claim 1, the method further comprising the steps of [[: (iii)]] obtaining a measurement of the cross-sectional area of the spleen of said racehorse candidate;

wherein said collection of measurements further comprises splenic cross-sectional area measurements of horses of about the same age, sex, and weight as said racehorse candidate.

16. (Currently amended) The method of claim [[12]] 15, ~~further comprising the step of selecting~~ wherein said racehorse candidate is selected if it has a ventricular septal wall width and splenic cross sectional area that is greater than the mean ventricular septal wall width and splenic cross-sectional area measurement from said collection of measurements.

17. (Currently amended) The method of claim [[12]] 15, ~~further comprising the step of selecting~~ wherein said racehorse candidate is selected if it has a ventricular septal wall width and a splenic cross sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and splenic cross sectional area measurements from said collection of measurements.

18. (Currently amended) The method of claim 1, the method further comprising the steps of [[: (iii)]] obtaining a measurement of the height [[X ]] times weight of said racehorse candidate;

wherein said collection of measurements further comprises height [[X ]] times weight measurements from horses of about the same age and sex as said racehorse candidate.

19. (Currently amended) The method of claim 18, ~~further comprising the step of selecting~~ wherein said racehorse candidate is selected if both the ventricular septal wall width and the height [[X ]] times weight measurement are greater than the mean ventricular septal wall width and height X weight measurements from said collection of measurements.

20. (Original) The method of claim 18, further comprising the step of selecting said racehorse candidate if it has both a ventricular septal wall width and a height [[X ]]

times weight measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and height and weight measurements from said collection of measurements.

21. (Currently amended) The method of claim 18, the method further comprising the steps of [[: (iii)]] obtaining measurements of the cross-sectional area of the left ventricle in systole of said racehorse candidate;

wherein said collection of measurements further comprises left ventricle in systole cross-sectional area measurements from horses of about the same age, sex, and weight as said racehorse candidate.

22. (Currently amended) The method of claim 21, ~~the method further comprising the step of selecting wherein~~ said racehorse candidate is selected if it has a ventricular septal wall width, a left ventricle in systole cross sectional area, and a height [[X ]] times weight measurement that is greater than the mean ventricular septal wall width, left ventricle in systole cross sectional area, and height [[X ]] times weight measurements from said collection of measurements.

23. (Currently amended) The method of claim 21, ~~the method further comprising the step of selecting wherein~~ said racehorse candidate is selected if it has a ventricular septal wall width, a left ventricle in systole cross sectional area, and a height [[X ]] times weight measurement that is in the 75<sup>th</sup> percentile or higher when compared to corresponding measurements from said collection of measurements.

24-27. Canceled

28. (Original) The method of claim 1, wherein said racehorse candidate is a yearling or two year old.

29. (Currently amended) The method of claim 1, the method further comprising the steps of:

~~(i)~~ (iv) obtaining a measurement of one or more of the cross-sectional area of the left ventricle in systole, the cross-sectional area of the left ventricle in diastole, or the percent change in ventricular area per stroke of said racehorse candidate;

~~(ii)~~ (v) obtaining a measurement of the height  $[[X]]$  times weight of said racehorse candidate;

~~(iii)~~ (vi) comparing said measurements from said racehorse candidate to a collection of measurements from a group of horses, wherein said collection of measurements comprises height  $[[X]]$  times weight measurements and one or more of cross-sectional area of the left ventricle in systole measurements, cross-sectional area of the left ventricle in diastole measurements, or percent change in ventricular area per stroke measurements from horses of the same age, weight and sex as said racehorse candidate.

30 – 31. Canceled.

32. (Currently amended) The method of claim 1, the method further comprising the step of:

~~(i)~~ (iv) obtaining an echocardiographic image of the heart of said racehorse;

~~(ii)~~ (v) rating the image according to at least one cardiac parameter selected from the group consisting of the general shape of the heart at diastole and systole, the clarity and sharpness of contrast of left ventricle during diastole and systole, the smoothness of the left ventricle during diastole and systole, blood backflow from the left ventricle during diastole and systole, valve closure, and clarity of the image in diastole; and

~~(iii)~~ (vi) comparing the rating to a collection of ratings of the same cardiac parameter from a group of horses of about the same age, sex, and weight of said racehorse candidate.